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Causes serious eye damage.	lost important symptoms and effects, both acute and delayed	
(Contd. on page 2 USA	Causes serious eye damage.	
	(Contd. o	n page 2) USA

(Contd. of page 1)

Product name: trans-3-(Trifluoromethyl)cinnamoyl chloride

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents CO2, sand, extinguishing powder. Do not use water. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Hydrogen fluoride (HF) Hydrogen chloride (HCI) Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Use neutralizing agent. Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. **Prevention of secondary hazards:** Keep away from ignition sources. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage

Handling

Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.
Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
Store away from oxidizing agents.
Store away from strong bases.
Store away from water/moisture.
Further information about storage conditions:
Store under dry inert and

Store under dry inert gas. This product is moisture sensitive. This product is molecule sensive. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from humidity and water. Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. **Control parameters** Components with limit values that require monitoring at the workplace: Not required. Additional information: No data Exposure controls Personal protective equipment Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all solied and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Penetration time of glove material (in minutes) Not determined **Eye protection:** Tightly sealed goggles Full face protection_ Body protection: Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Low melting solid Color: White Pungent Not determined. Odor Odor threshold:

(Contd. on page 3)

Product name: trans-3-(Trifluoromethyl)cinnamovl chloride

		wed on 05/10/2010		
Product name: trans-3-(Trifluoromet	hyl)cinnamoyl chloride			
pH-value:	Not applicable.	(Contd. of page 2)		
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	28-31 °C (82-88 °F) 233 °C (451 °F) Not determined			
Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	94 °C (201 °F) Not determined. Not determined Not determined Not determined.			
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density at 20 °C (68 °F): Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic:	Product does not present an explosion hazard. Not determined Not applicable. 1.37 g/cm ³ (11.433 lbs/gal) Not determined. Not determined. Not determined Not determined. Not applicable. Not applicable. Not applicable. Not applicable.			
Other information No further relevant information available. 10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions No dangerous reactions known Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents Bases Water/moisture Hazardous decomposition products: Carbon monoxide and carbon dioxide Hydrogen fluoride Hydrogen chloride (HCl)				
11 Toxicological information Information on toxicological effects Acute toxicity: Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes severe skin burns. Eye irritation or corrosion: Causes serious eye damage. Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Mutagenicity: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Mutagenicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.				
12 Ecological information Toxicity Aquatic toxicity: No further relevant info Persistence and degradability No furth Bioaccumulative potential No further re Mobility in soil No further relevant inforn Additional ecological information: General notes: Do not allow material to be released to th Do not allow undiluted product or large q Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further releva	er relevant information available. elevant information available. mation available. he environment without proper governmental permits. juantities to reach ground water, water course or sewage system. t			
13 Disposal considerations Waste treatment methods Recommendation Consult state, local o Uncleaned packagings: Recommendation: Disposal must be ma	or national regulations to ensure proper disposal. ade according to official regulations.			
14 Transport information				
UN-Number DOT, IMDG, IATA	UN3261			
		(Contd. on page 4)		

Product name: trans-3-(Trifluoromethyl)cinnamoyl chloride				
	(Contd. of page 3)			
UN proper shipping name DOT IMDG, IATA	Corrosive solid, acidic, organic, n.o.s. (trans-3-(Trifluoromethyl)cinnamoyl chloride) CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (trans-3-(Trifluoromethyl) cinnamoyl chloride)			
Transport hazard class(es) DOT				
Class Label Class Label IMDG, IATA	8 Corrosive substances. 8 8 (C4) Corrosive substances 8			
Class Label	8 Corrosive substances.			
Packing group DOT, IMDG, IATA	8 			
Environmental hazards:	Not applicable.			
Special precautions for user Segregation groups	Warning: Corrosive substances Acids			
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	• Not applicable.			
Transport/Additional information: DOT				
Marine Pollutant (DOT):	No			
UN "Model Regulation":	UN3261, Corrosive solid, acidic, organic, n.o.s. (trans-3-(Trifluoromethyl)cinnamoyl chloride), 8, II			
 5 Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms GHS05 Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P280 Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P303+P361+P353 IF IN EVES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor/ National regulations This product is not listed in the U.S. Environmental Protection Agency. Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. SARA Section 313 (specific toxic chemical listings) Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not liste				
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.				
16 Other information Employers should use this information only as a supplement to other information information to ensure proper use and protect the health and safety of employee conformance with this Material Safety Data Sheet, or in combination with any ot	n gathered by them, and should make independent judgement of suitability of this s. This information is furnished without warranty, and any use of the product not in her product or process, is the responsibility of the user.			

conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Department
Date of preparation / last revision 11/24/2015 / Abbreviations and accoryms:
RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO: Thermational Civil Aviation Organization" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Air Transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transport Association
IATA: International Air Transport Association
IATA: Interna

Product name: trans-3-(Trifluoromethyl)cinnamoyl chloride

vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) Page 5/5 Printing date 11/24/2015 Reviewed on 05/10/2010

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USA